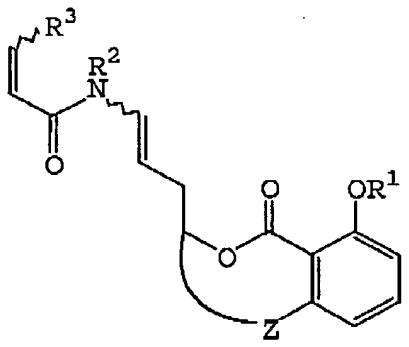
AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application.

1. (Currently Amended) A method of treating ~~an intra-organellar acidification of intracellular organelles~~ a condition treatable by the inhibition of vacuolar-type (H+)-ATPase, said method comprising administering to a patient an amount effective to ~~treat intra-organellar acidification of intracellular organelles of a~~ inhibit vacuolar-type (H+)-ATPase of at least one compound of the formula:

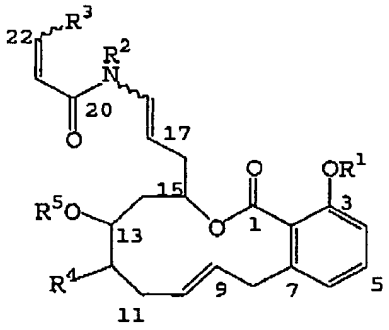


(I),

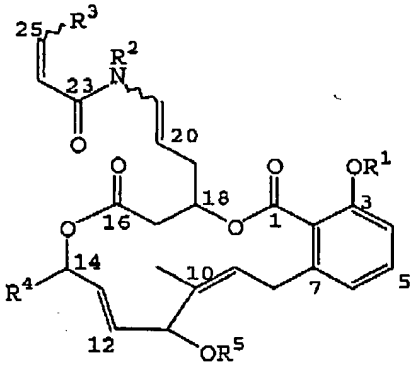
wherein R^1 and R^2 are the same or different and each is H, a straight-chain or branched saturated or unsaturated alkyl, an aryl, R^6CH_2-, R^6CO-, or R^6SO_2-, wherein R^6 is H, a straight-chain or branched saturated or unsaturated alkyl, or an aryl; R^3 is H, a straight-chain or branched saturated or unsaturated alkyl, an aryl, an oxime, or an oxime methyl ether; the aromatic ring is unsubstituted or substituted with at least one substituent selected from the group consisting of a halogen, a nitro, an amino, a hydroxyl, a thio, an acyl, an alkyl, and a cyano; the saturated alkyl, unsaturated alkyl and aryl substituents defined in R^1-R^3 and R^6 are unsubstituted or substituted with at least one substituent selected from the group consisting of a halogen, a nitro, an amino, a hydroxyl, a thio, an acyl, an alkyl, and a cyano; and Z is a contiguous linker comprising a chain of 7-10 atoms which, together with the five atoms beginning with the carbon of the aromatic ring of formula (I) in meta-relationship with OR^1 and ending with the carbon directly attached to the alkyl oxygen of the lactone of formula (I), said carbons being covalently bonded to either end of linker Z, integrally form a 12-15 membered ring; or a pharmaceutically acceptable salt, an ester, or a prodrug thereof, wherein the condition is selected from the group consisting of urinary acidification, bone resorption, osteoporosis, fertility, angiogenesis, glaucoma, and Alzheimer's disease.

2. (Canceled)

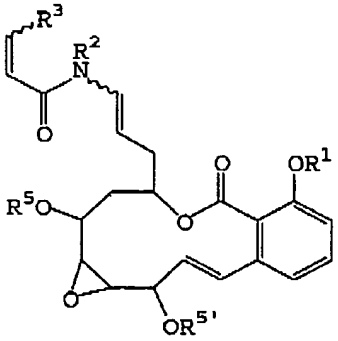
3. (Previously Presented) The method of claim 1, wherein said compound is selected from the group consisting of:



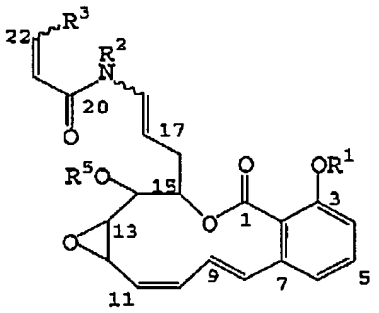
(IA),



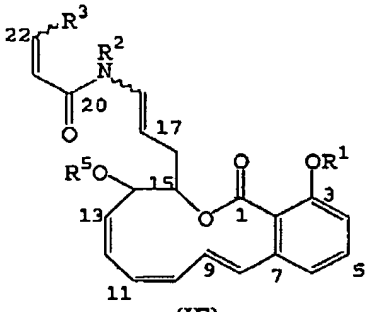
(IB),



(IC),



(ID),

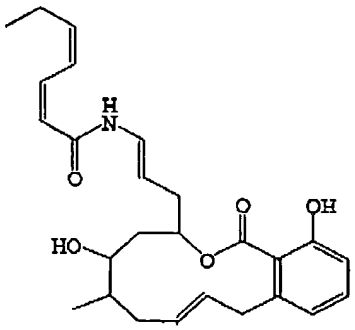


and (IE),

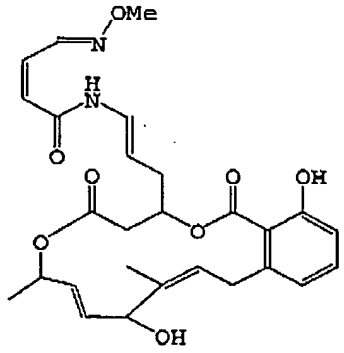
wherein R^1 and R^2 are the same or different and each is H, a straight-chain or branched saturated or unsaturated alkyl, an aryl, R^6CH_2-, R^6CO-, or R^6SO_2-, wherein R^6 is H, a

straight-chain or branched saturated or unsaturated alkyl, or an aryl; R^3 is H, a straight-chain or branched saturated or unsaturated alkyl, an aryl, an oxime, or an oxime methyl ether; R^4 is H, an alkyl, or R^7CH_2-, wherein R^7 is R^6O-, R^6CO_2-, or R^6SO_3-; R^5 and $R^{5'}$ are the same or different and each is H, a straight-chain or branched saturated or unsaturated alkyl, an aryl, a glycoside, R^6CH_2-, R^6CO-, or R^6SO_2-; the saturated alkyl, unsaturated alkyl and aryl defined in R^1-R^3, R^5, $R^{5'}$ and R^6, and the alkyl defined in R^4, are unsubstituted or substituted with at least one substituent selected from the group consisting of a halogen, a nitro, an amino, a hydroxyl, a thio, an acyl, an alkyl, and a cyano; and the aromatic ring of formula (I) is unsubstituted or substituted with at least one substituent selected from the group consisting of a halogen, a nitro, an amino, a hydroxyl, a thio, an acyl, an alkyl, and a cyano; or a pharmaceutically acceptable salt, an ester, or a prodrug thereof.

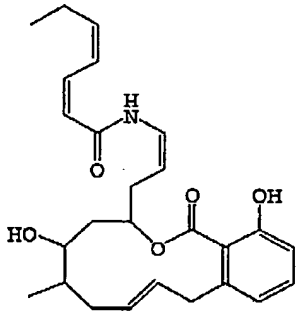
4. (Previously Presented) The method of claim 3, wherein said compound is selected from the group consisting of:



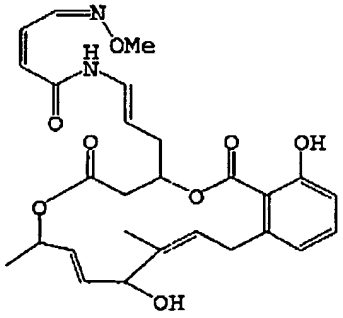
salicylihalamide A,



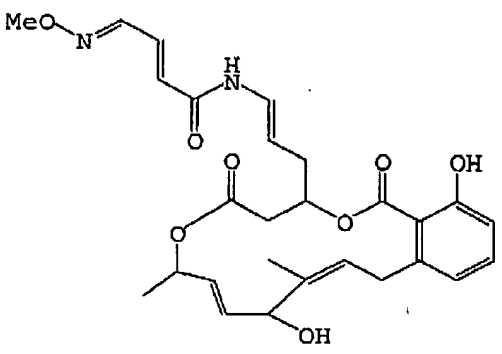
lobatamide A,



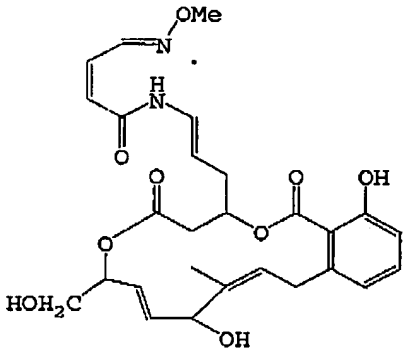
salicylihalamide B,



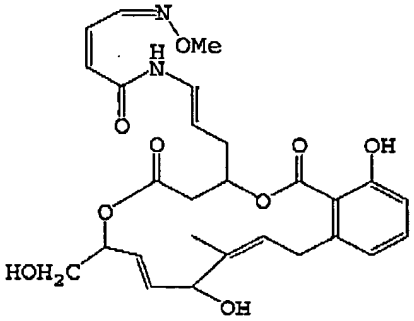
lobatamide B,



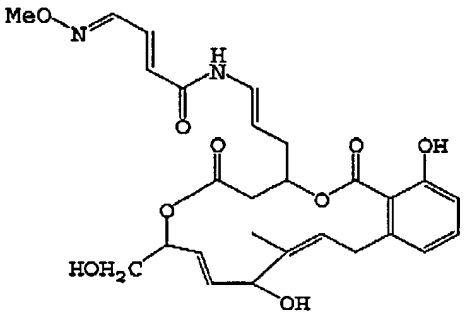
lobatamide C,



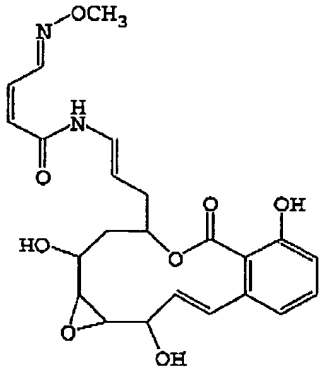
lobatamide D,



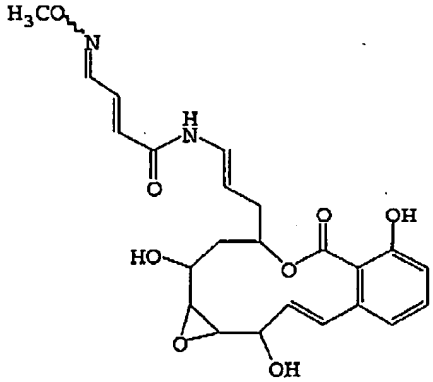
lobatamide E,



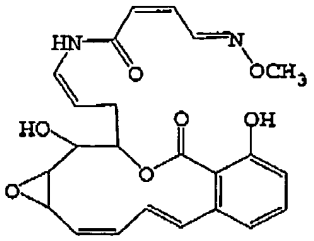
lobatamide F,



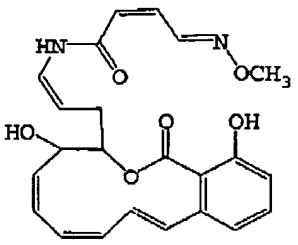
CJ-12,950,



CJ-13,357,



oximidine 1, and

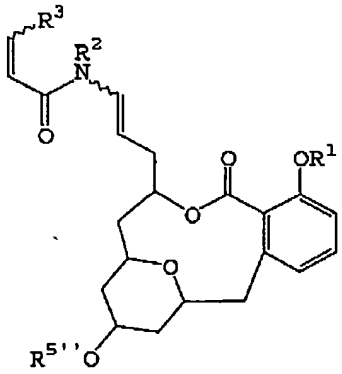


oximidine 2;

or a pharmaceutically acceptable salt, an ester, or a prodrug thereof.

5. (Canceled)

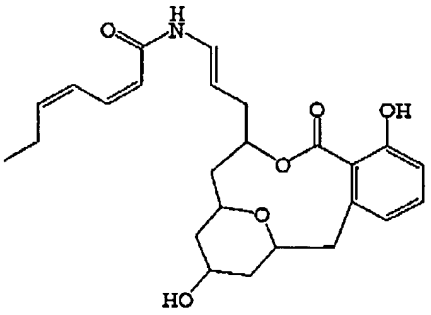
6. (Currently Amended) A method of treating ~~an intra-organellar acidification of intracellular organelles~~ a condition treatable by the inhibition of vacuolar-type (H+)-ATPase, said method comprising administering to a patient an amount effective to ~~treat intra-organellar acidification of intracellular organelles of a~~ inhibit vacuolar-type (H+)-ATPase of at least one compound of the formula:



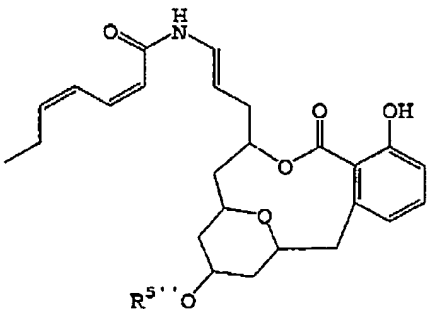
(IF),

wherein R^1-R^3 are as defined in claim 1 and $R^{5''}$ is H, a straight-chain or branched saturated or unsaturated alkyl, an aryl, a glycoside, R^6CH_2-, R^6CO-, or R^6SO_2-, wherein R^6 is as defined in claim 1 and the saturated alkyl, unsaturated alkyl and aryl defined in $R^{5''}$ are unsubstituted or substituted with at least one substituent selected from the group consisting of a halogen, a nitro, an amino, a hydroxyl, a thio, an acyl, an alkyl, and a cyano, wherein the condition is selected from the group consisting of urinary acidification, bone resorption, osteoporosis, fertility, angiogenesis, glaucoma, and Alzheimer's disease.

7. (Previously Presented) The method of claim 6, wherein said compound is selected from the group consisting of:



apicularen A and



apicularen B,

wherein $R^{5''}$ is N-acetyl-β-D-glucosamine.

8. (Previously Presented) The method of claim 1, which further comprises co-administering to a patient in need thereof a therapeutically effective amount of at least one additional compound other than a compound defined in claim 1.

9. (Previously Presented) The method of claim 8, wherein said additional compound is selected from the group consisting of bafilomycins and concanamycins.

10. (Previously Presented) The method of claim 9, wherein said additional compound is concanamycin A.

11. (Previously Presented) The method of claim 9, wherein said additional compound is bafilomycin A_1.

12. (Previously Presented) The method of claim 1, wherein said vacuolar-type (H+)-ATPase inhibiting-effective amount is effective to inhibit intra-organellar acidification of intracellular organelles.

13. (Previously Presented) The method of claim 1, wherein said vacuolar-type (H+)-ATPase inhibiting-effective amount is effective to inhibit urinary acidification.

14. (Previously Presented) The method of claim 1, wherein said vacuolar-type (H+)-ATPase inhibiting-effective amount is effective to inhibit bone resorption.

15. (Previously Presented) The method of claim 14, wherein said vacuolar-type (H+)-ATPase inhibiting-effective amount is effective to treat osteoporosis.

16. (Previously Presented) The method of claim 1, wherein said vacuolar-type (H+)-ATPase inhibiting-effective amount is effective to inhibit fertility.

17. (Previously Presented) The method of claim 1, wherein said vacuolar-type (H+)-ATPase inhibiting-effective amount is effective to inhibit angiogenesis.

18.-31. (Canceled)

32. (New) The method of claim 1, wherein said vacuolar-type (H+)-ATPase inhibiting-effective amount is effective to treat glaucoma.

33. (New) The method of claim 1, wherein said vacuolar-type (H+)-ATPase inhibiting-effective amount is effective to treat Alzheimer's disease.